



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Date: April 13, 2018

Memo: Public Release of Validated Data Results for Sampling of the Residential Area of the Beck's Lake NPL Site

Overview:

U.S. Environmental Protection Agency (EPA) collected soil samples in October 2017 from residential properties in the City of South Bend close to LaSalle Park. The sample results are helping EPA understand whether the soil in properties near the LaSalle Park Area of the Beck's Lake site may have been contaminated with site-related lead and arsenic. In summary, the soil sampling results indicate that there is no immediate risk from exposure to the soils in the sampled area.

EPA is providing this summary of the validated data to the affected communities and residents prior to determining what, if any, cleanup plan is needed, as part of our community involvement efforts and to be open with the public. While we protect individual property owner's private information, EPA strives to share information quickly and to be open to discussing sampling data.

Sampling Methodology:

The residential sampling area includes Zones 1A and 1B and encompasses properties west of the park to Kenmore Street; south to a line parallel to Newcome Street, between Washington Street and Jefferson Boulevard; and east to Kaley Street (Figures 2 and 4).

EPA and its contractor collected soil samples from 78 yards or yard equivalent units. At properties where there was a large yard area, EPA divided large yards into multiple "yard equivalent units." Each yard or yard equivalent unit is equal to one "yard unit." Each yard unit was less than or equal to 5,000 square feet in area. The samples were obtained at various depths as described below:

- **Surface soil:** EPA took surface soil samples (from 0-6 inches below ground surface [bgs]) from 78 yard units.
- **Near-surface soil:** EPA took near-surface samples (from 6 to 30 inches bgs, at 6 inch increments) from 36 of the 78 yard units, for a total of 144 near-surface samples.
- **Subsurface soil:** EPA took a total of 10 samples from seven subsurface soil cores (from 3 to 12 ft bgs).

The levels of lead and arsenic found at each sample location were screened against EPA's **Removal Management Level(s) (RML)**. EPA developed RMLs to help identify areas, contaminants, and conditions where an immediate risk-based response action or immediate clean-up may be appropriate. EPA has established RML screening levels for residential soil of 400 parts lead per million parts soil (ppm) and 68 ppm arsenic.

Summary of Sampling Results:

- The **lead** results from the **surface** soil samples in the 78 yard units were all below EPA's RML of 400 ppm. Three **near-surface** sample results out of 144 were above the RML for lead. The highest lead in a **near-surface** sample was 939 ppm at 18-24 inch depth. The two other near-surface samples that exceeded 400 ppm were 402 ppm (at 6-12 inches bgs) and 488 ppm (at 18-24 inches bgs) at the same location. One **subsurface** sample from 3-6 ft depth had lead at 689 ppm; the others were all below the lead RMLs. Although these four sample results were above the RML, they were obtained below the soil surface. The soil surface offers a protective barrier and helps prevent direct contact with these soils. A bar graph showing the range and distribution of the surface and near-surface lead results is shown in **Figure 1** and a map of the lead sampling results on a block level is shown in **Figure 2**.
- The **arsenic** results from the surface soil samples in the 78 yard units were all below the EPA's RML of 68 ppm. Two **near-surface** sample results out of 144 were above the RML for arsenic. The highest arsenic in a **near-**

surface sample was 87.9 ppm at 12-18 inch depth. The other near-surface sample that exceeded 68 ppm was 74.1 ppm at 18-24 inches at the same location. None of the **subsurface** (3-12 ft.) arsenic samples exceed RMLs. Although there were two sample results above the arsenic RML, they were obtained below the soil surface, which offers a protective barrier and helps prevent direct contact with these soils. A bar graph showing the range and distribution of the arsenic surface and near-surface results is shown in **Figure 3** and a map of the arsenic sampling results on a block level is shown in **Figure 4**.

- The areas where the lead and arsenic results exceed the RML screening value do not show evidence of recent digging or subsurface activities.

The soil sampling results indicate that there is no immediate risk from exposure to the soils in the sampled area, and no immediate clean-up is needed. EPA, Indiana Department of Environmental Management (IDEM) and the Agency for Toxic Substances and Disease Registry will be conducting further evaluations of the data to determine if additional steps are necessary under the Superfund process.

For more information, visit EPA's website for the Beck's Lake NPL site at www.epa.gov/superfund/beans-lake.

If you have any questions about the data or Figures please contact:

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Lead and Arsenic Resources

If you have general questions or concerns about lead or arsenic these websites have additional information, including phone numbers and contact information you can call:

U.S. Environmental Protection Agency

<https://www.epa.gov/lead>
<https://www.epa.gov/c-ferst/c-ferst-issue-profile-arsenic>

Indiana Department of Environmental Management

<http://www.in.gov/idem/health/2333.htm>
https://www.in.gov/idem/files/factsheet_arsenic.pdf

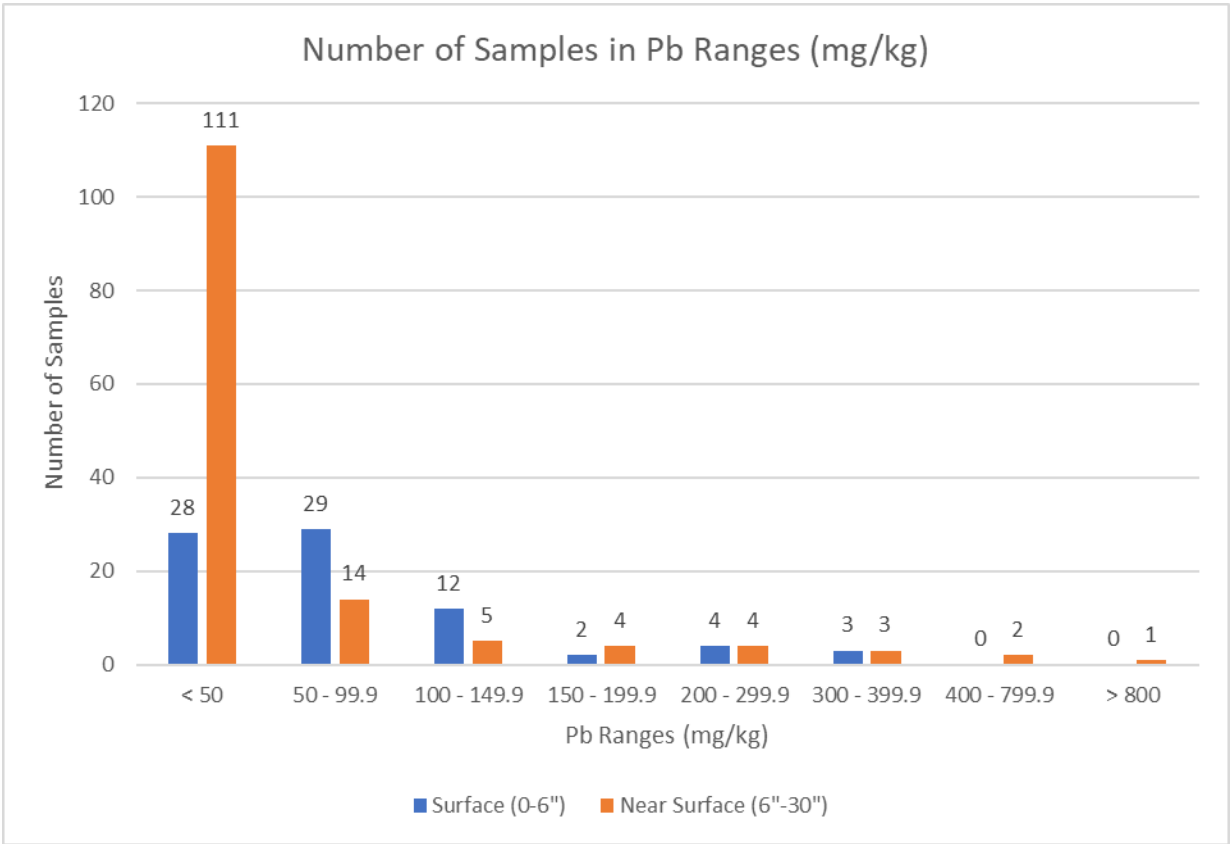
Agency for Toxic Substances and Disease Registry

<https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=19&tid=3>
<https://www.atsdr.cdc.gov/toxfaqs/tfacts13.pdf>

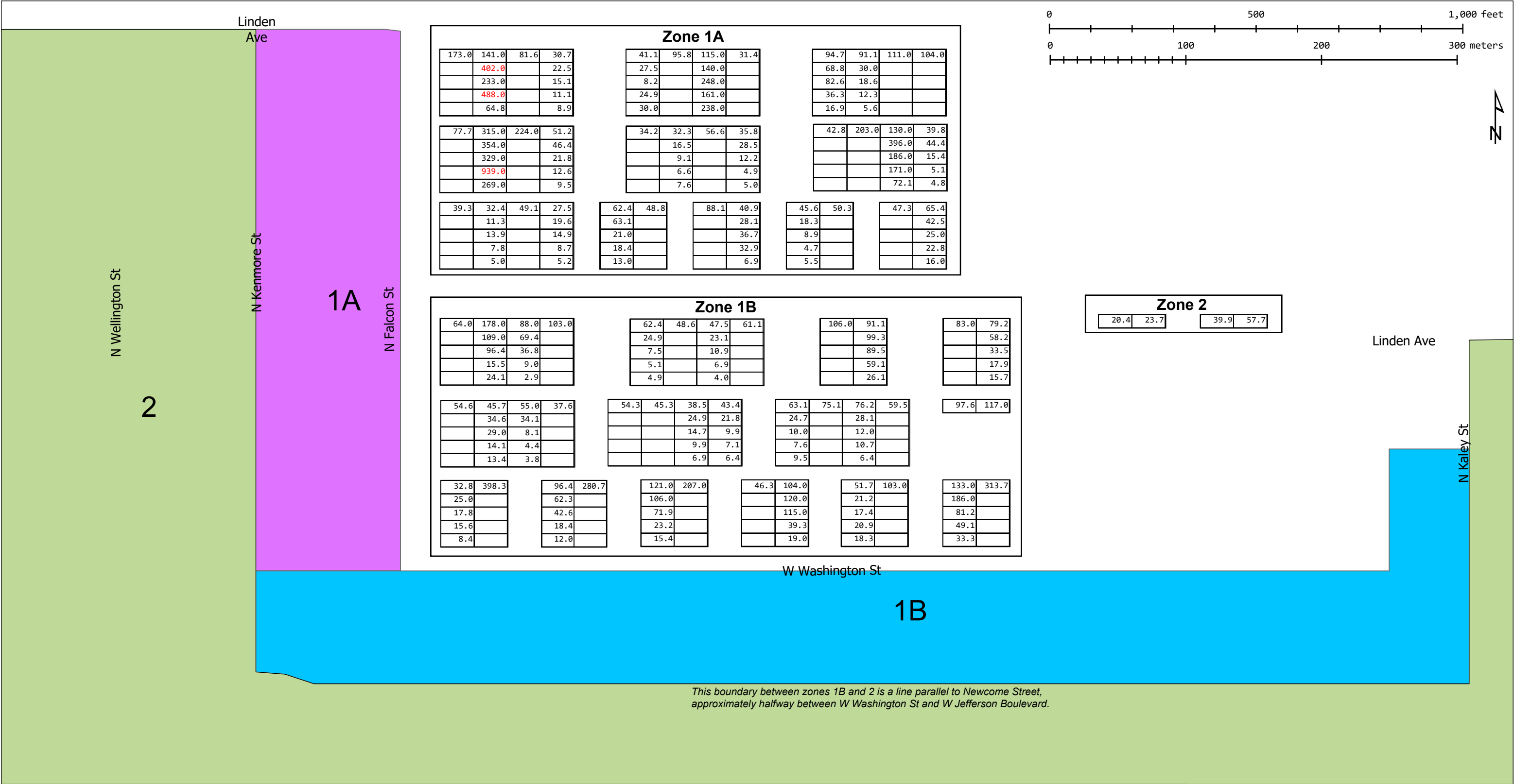
The St. Joseph County Health Department

<http://www.sjchd.org/environmental/lead/>

Figure 1. Number of samples from the Beck’s Lake Residential surface and near-surface sampling validated data with concentrations of lead (Pb) in selected concentration ranges.



- Notes:
- EPA’s RML for lead = 400 ppm (400 mg/kg)
 - **Subsurface** samples are not included in these numbers



- Zone 1A
- Zone 1B
- Zone 2

Lead value at 0-6" bgs
Lead value at 6-12" bgs
Lead value at 12-18" bgs
Lead value at 18-24" bgs
Lead value at 24-30" bgs

Notes:

- Lead values are stated in ppm (parts per million)
- The boxes summarizing the data from Zones 1A and 1B do not represent a particular location on the block with which the data is affiliated.



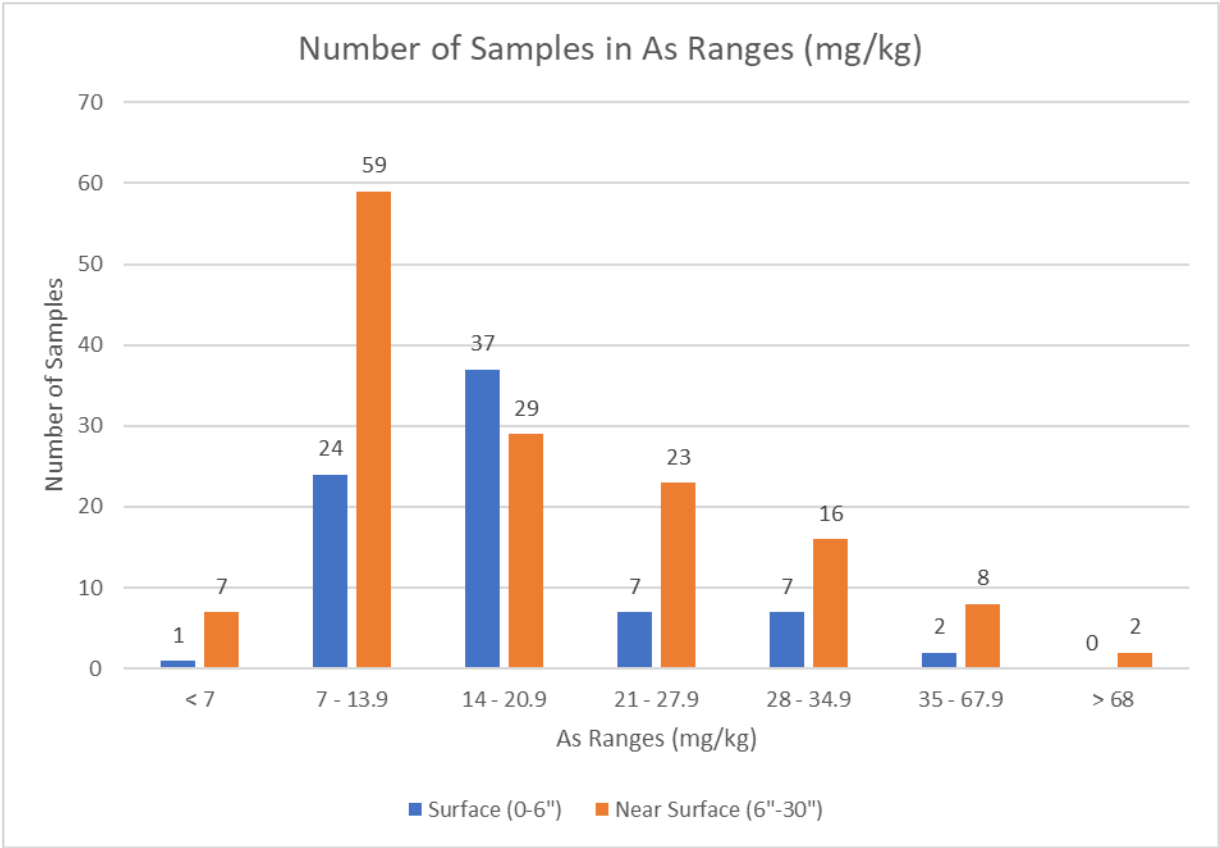
BECKS LAKE SUPERFUND SITE - RESIDENTIAL AREA
SOUTH BEND, ST. JOSEPH COUNTY, INDIANA

FIGURE 2
SURFACE LEAD CONCENTRATIONS

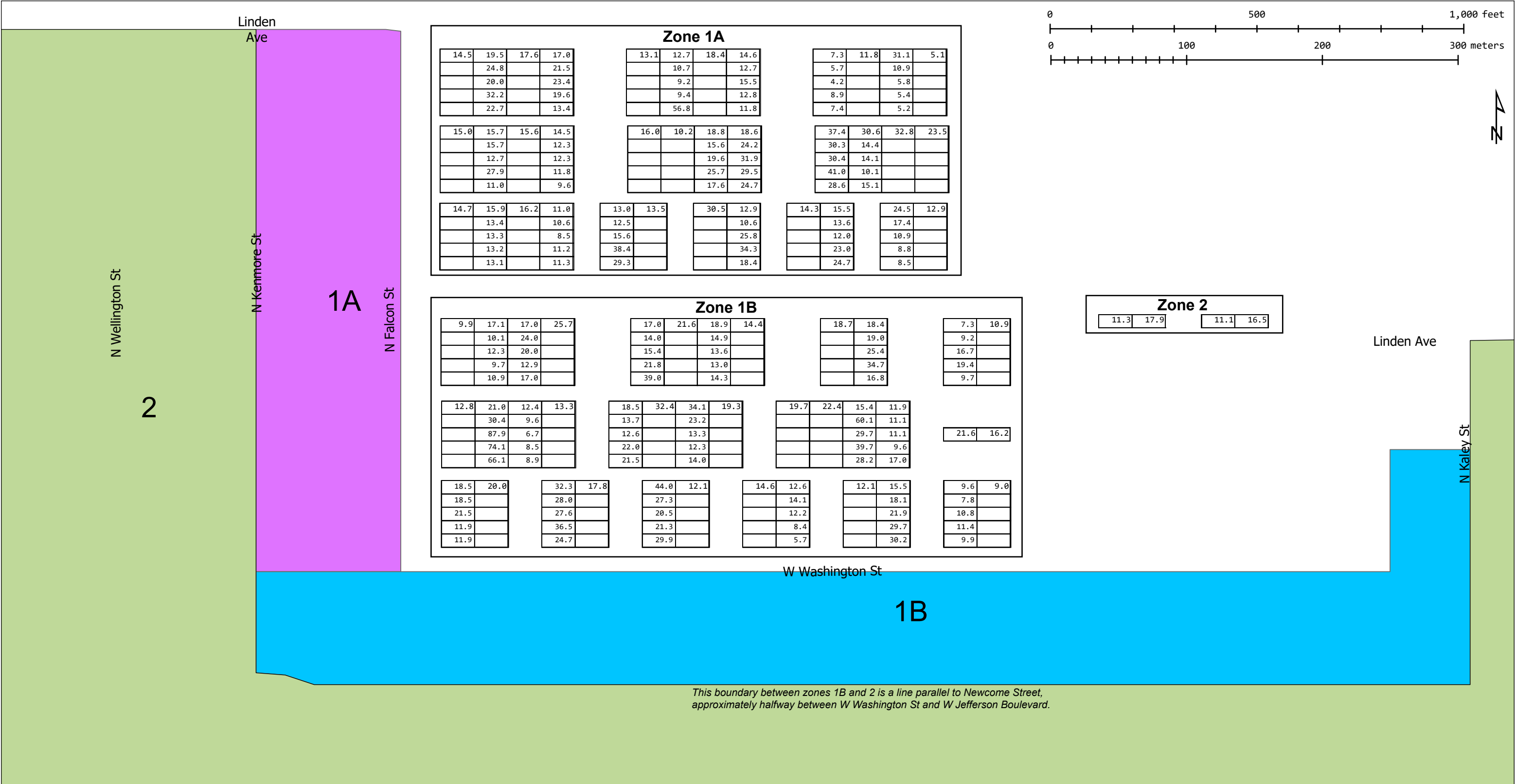
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Figure 3. Number of samples from the Beck’s Lake Residential surface and near-surface sampling validated data with concentrations of Arsenic (As) in selected concentration ranges.



- Notes:
- EPA’s RML for Arsenic = 68 ppm (68 mg/kg)
 - **Subsurface** samples are not included in these numbers



- Zone 1A
- Zone 1B
- Zone 2

Arsenic value at 0-6" bgs
Arsenic value at 6-12" bgs
Arsenic value at 12-18" bgs
Arsenic value at 18-24" bgs
Arsenic value at 24-30" bgs

Notes:

- Arsenic values are stated in ppm (parts per million)
- The boxes summarizing the data from Zones 1A and 1B do not represent a particular location on the block with which the data is affiliated.